

Correspondence.

Miscellaneous.

MEASURING ROUND TIMBER.

Sir,—On page 559 of your last volume, a correspondent subscribing himself "L." complains of what he terms "a curious discrepancy in two ways of measuring a stick of round timber," and expresses a wish "to see it explained." He instances a piece 80 feet long, 6 inches diameter at one end, and 6 feet at the other, and informs us that "the contents, taking the centre of the length for the quarter girth will be found to be 321-22050080," but that if the piece be cut into three pieces of 35 feet, 10 feet, and 35 feet long respectively, and each piece be measured separately in the same manner, the contents added together will be found to be 624-5597634390548525. Permit me to inform him that the discrepancy between the two operations (for they are not different methods) arises from the simple fact of their being both of them wrong; and that the difference between their results proves them to be so; for had they been correct, it is self-evident that the sum of the contents of the parts must be equal to the contents of the whole. It is absurd to "take the centre of the length for the quarter girth." If "L." was computing the superficies of a triangle, he might measure at the centre for a multiplier of the length with propriety, but the measurement of the "stick of round timber" is a cubical affair, and, to do it properly and scientifically, he must consider it (what in its geometrical capacity it is) the frustum of a cone, and proceed as follows, viz.: find the mean area (not by girthing it in the centre, but by adding together the squares of the two diameters, and the product of the two), and multiply their sum by 2618, the one-third of 7854 (which is the area of a circle whose diameter is 1), then multiply the main area thus found by the length, and the product is the contents of the frustum.

Or the mean area may be found, by adding together the areas of the two ends, and the mean proportional between them, which is the square root of their product, and divide their sum by 3.

Measured in this way, the contents of the piece given is 822-032 feet, or 822 feet 89-856 inches cubic; and if the three divisions be names are each measured in the same way, "L." will find that no discrepancy exists between the sum of their results and the contents I have given.

Though the question seems of a rather whimsical character, yet as it belongs to the important subject of timber surveying, on which a great many erroneous notions prevail, I deem it not undervaluing of my efforts with me, and give insertion to this reply in the columns of your next. Should "L." wish to see the solution at length, I shall be happy to furnish it. I am, Sir, your obedient servant,

Liverpool, 9th Jan. 1844. S. HUGGINS.

ARCHITECTS' COMMISSION.

Sir,—You will oblige an early subscriber, an architect, by inquiring through the medium of your paper, whether an architect's commission of 21 per cent. can be substantiated for a series of drawings, and a report describing the same, with estimates, and the probable expense. Any subscriber or correspondent having, in the course of his professional career, had the unpleasant necessity enforced on him of establishing his just claim by recourse to litigation, will confer an obligation by ascertaining the result thereof, by which an immense benefit may be derived, not only by myself, but by almost every member of the profession.

I remain, Sir, yours faithfully,

A SUBSCRIBER.

The drawings consist of four elevations, two sections, and plans of four stories; the estimate was £2,000.

[We think that within the charge of 21 per cent. should be included the making a detailed specification of the work.—Ed.]

THE LEICESTER MONUMENT.

Sir,—The chairman of the committee having informed the competitors of the result of this competition, in a circular expressed in terms of courtesy and fair dealing, and giving the name of the successful candidate, I would suggest that your correspondent in last week's paper should plainly state whether his remarks apply to the design No. 40, stated to be the one selected.

ANOTHER COMPETITOR.

London, January 10, 1844.

BLUE LIAS LIME.

Sir,—I shall be glad to be informed, through the medium of your valuable magazine, whether blue lias can be obtained any where in Yorkshire or on any of the rivers which branch from the Humber convenient for shipment; or not, where the stone can be procured.

I am, Sir, your obedient servant,
Bridlington, Jan. 6th, 1844. INQUIRER.

MR. JOSEPH'S STATUE OF SIR DAVID WILKIE.—A private view was afforded to the friends of Mr. Joseph, to several of the nobility and persons of distinction, and to those more immediately connected with the Fine Arts of the statue, just finished, of the late Sir David Wilkie, by Mr. Joseph, now placed in the National Gallery, in Trafalgar-square, and open to public view. The statue is a representation of the late eminent artist in an attitude of contemplation; in the right hand, which crosses the breast, is a pencil, whilst the left holds a portfolio of designs or drawings. The figure is in a modern costume, the angles of which are kept down; and the whole is rendered classical in its appearance by a cloak, or robe, which falls in broad folds over the shoulders. The likeness is correct; it may be somewhat idealized and filtered, but not beyond what is allowable, or at least what every sculptor allows himself. The figure is dignified and simple; it is happily free from any exaggerations, neither is it made up of littlenesses, or flattered into detached portions. The drapery of the gown, or robe, is very good. The statue is placed upon an elegant and massive pedestal of polished veined marble in a shallow recess, upon one side of which, covered by plate glass, is preserved a favourite palette of the deceased painter, and from not only an elegant ornament to the National Gallery, but a proof that sculpture in this country is by no means on the decline. It is one of the best, if not the best, statue which Mr. Joseph has produced.

ARTESIAN WELL.—An artisan well has been recently completed at the Middlesex Pauper Lunatic Asylum at Hanwell, under the superintendence of Mr. F. Bullen, of London, which, from the quantity and the quality of the water which it yields, as well as the height to which the water rises, may be reckoned as one of the most powerful in the kingdom. The shaft to a depth of 31 feet is 10 feet in diameter, and thence to a further depth of 200 feet is six feet in diameter, making 31 feet. At that point a small auger was driven below into a sand stratum, strongly charged with water, through which it was found necessary to force cast-iron cylinders into the clay beneath a depth of 12 feet. The whole of the shaft is constructed of brick work in cement, and the cylinders are also lined with the same material. At a depth of 543 feet a guide rope was inserted, and secured with brick work, and the boring commenced with pipes of 14 inches internal diameter, which are carried down into the flints immediately overlying the chalk, a depth of 290 feet, whence the water now rises and overflows the surface at the rate of 100 gallons per minute, and at 26 feet above the surface at the rate of 23 gallons per minute. The following is a description of the strata through which the well has been sunk and bored, with the exception of a few veins of septaria:—vegetable soil, 1 ft. 6 in.; gravel, 7 ft.; sand, 26. 6 in.; gravel and sand, 9 ft.; brick clay, 2 ft.; blue or London clay, 169 ft.; indurated mud, sand, and clay, with pieces of wood and shells embedded, 24 ft.; pebbles and shells, 3 ft.; plastic clay, 2 ft.; sand, 2 ft.; plastic clay, 4 ft.; indurated mud, sand, and clay, 8 ft.; dark brown clay, 9 ft.; green sand and clay, 7 ft.; oyster bed, 2 ft. 9 in.; pebbles and sand, 2 ft. 3 in.; bed of flint stones into which the bore is carried, 3 ft. The temperature of the water as it overflows the surface is 55 deg. of Fahrenheit.

HEALTH OF TOWNS.—Sir H. De La Beche, one of the Commissioners appointed by Government to ascertain the best mode of improving the health of towns, paid an official visit to Bath during the week before last, accompanied by Mr. Hobhouse, the Secretary to the Commission. The several registrars of births, deaths, and marriages, within the borough, are busily engaged under the Commissioner's direction, in preparing well-arranged statistical tables from July 1842 to July 1843, in order that the sanitary regulations of that city may be duly brought before the Commission.

SALUBRITY RAILWAY.—It is now stated that the proposed line is to be carried out solely by the South-Western Railway, irrespective of any local shareholders. The bill will be applied for early in the session.

RAILWAY CROSSING COMMON ROADS.—A few days since, the gates across the railway at Berston station were not open when the first train from Derby came down the line, and the morning being very dark, the engineer did not see the obstruction, and abate the speed of the train, which was then going very fast; the consequence was, that the engine knocked the gate all to pieces; and the force with which some part of it was thrown back, dashed to the ground the palings which enclose the station-house, breaking off the bars like so many matches. Fortunately the extent of the damage done is confined to the gate and palings; but this should be one more warning of the culpable inhumanity of railways passing common roads: the bare necessity of the removal of gates and barriers from across a railway in-are, notwithstanding all possible care, the frequent occurrence of accident; and we dread to contemplate the cruel loss of life which will sooner or later ensue from the possibility of persons while going along a common road being cut down by a train of railway vehicles.

PROJECTED RAILWAY BETWEEN MARYPORT AND WHITEHAVEN.—A new railway has been projected, and will be brought before Parliament in the ensuing session, for constructing a line between Maryport and Whitehaven, in Cumberland. This forms a portion of the great north line from Lancaster, before the public a few years ago, which was to cross Morecambe Bay, but did not at that time meet the requisite supplies of capital, probably from a fear of the embankment in the sea across the bay from Lancaster to Ulverston. It has now assumed a more practicable shape, being confined to a single line of rails along the coast from Whitehaven to Maryport, where it will unite with the railway to Lancaster, and thence to Newcastle-on-Tyne, and when completed, will form a continuous line of railway from Whitehaven to Tynemouth, Shields, Sunderland, Hartlepool, Stockton, and all places in connection with the railways in the county of Durham. The country has been examined, and the line pointed out, by Mr. George Stephenson, and his oldest assistant, Mr. John Dixon, formerly resident engineer of the Stockton and Darlington Railway, and afterwards, for several years, of the Liverpool and Manchester Railway, has been to Whitehaven preparing the necessary plans and sections for depositing with the clerk of the peace for the county of Cumberland. The present project meets with the approbation and support of the Earl of Lonsdale, through whose property the line runs for many miles, so that there is little doubt but ere long this projected line will be added to the existing railway communications in the kingdom.

CENTRAL LINE OF RAILWAY INTO SCOTLAND.

—A report on a central line of railway to Scotland, by Messrs. Johnson and Wood, has been addressed to the directors of the Newcastle and Carlisle Railway Company. The line proposed is to take a central route, commencing at the Rose Hill station of the above-named line, and proceed by Glaisdale, Askerton Castle, Cusack, New Castleton, Shields, Hawick, Melrose, and Galahelds to Edinburgh, at about an equal distance from the proposed Caledonian line on the west, and the Great North British on the east. The proposal of this line appears to be brought forward not from any spirit of opposition, but to endeavor to show that the central line will prove of equal accommodation to the public at less expense than the other two lines, and in the working an annual saving of 227,383 l. will be effected, paying 5 per cent. on the capital expended, and opening a line of communication through a mineral, manufacturing, and agricultural country, whose resources have never yet been developed.

RAILWAY JUNCTION.—At the meeting of the Hull and Selby Railway shareholders, the terms of junction with the Manchester and Leeds line were agreed to, so that it only remains to be carried out under the sanction of Parliament for the benefit of the general body. The principle of amalgamation, which at the present moment is the great feature in the railway world, will tend to consolidate interests, and destroy the evil of competitive management, if properly regulated, and the view to public convenience as well as individual benefit.

STEAM THEATRE.—A great theatre is about to be erected at Brussels, in which the machinery of the scenes and decorations is to be moved by steam, with little or no aid from manual labor. The gradations of day and night, the effects of storms, moonlight, conflagration—even the movements of the clouds—are to be effected by optical illusions and the various combinations and contrivances of the ingenious mechanic.